REMARKS

By the above amendment, the specification has been amended to identify reference character "41" as a cassette rather than a wafer, and the reference signs referred to by the Examiner as not being mentioned in the description, but shown in the drawings, have now been utilized in the description. Therefore, applicants submit that the objection to the drawings and the specification as set forth in sections 1 and 2 at page 2 of the Office Action have been overcome by the amendment to the specification and amendment of the drawings is unnecessary.

Additionally, by the present amendment, the abstract has been amended so as not to exceed 150 words.

Furthermore, by the present amendment, the claims have been amended to clarify features of the present invention, including the utilization of illumination through an objective lens and obtaining an image of the sample through the objective lens and the utilization of a bright field illumination system with, for example, independent claims 1 and 2 being amended to recite steps of adjusting optical conditions so as to decrease a difference of contrast in the image signal among segments corresponding to a plurality of regions on the sample. It is noted that claim 2 further defines the adjusting of a transmission ratio of 0-th order diffracted light while claim 8 recites the adjusting of polarization conditions of light generated by the illumination and reflected from the sample based upon contrast information of the obtained image of the sample. Claim 11 recites an illuminating system which illuminates a sample loaded on the stage to an objective lens and an optical control unit which controls the transmission ratio of light illuminated by the illuminating system and reflected regularly from the sample, with claim 13 reciting the feature of illumination with polarized light through an objective lens and adjusting the polarization conditions of the light. As described in the specification of this application, utilizing such bright field illumination through an objective lens and

adjusting the contrast in the manner defined, enables proper detection of defects in the manner discussed. Applicants submit that such features are not disclosed or taught in the cited art, as will become clear from the following discussion.

The rejection of claims 1, 8, 10-13 and 15 under 35 U.S.C. 102(a) as being anticipated by Fairley et al (6,288,780) and the rejection of claims 2-7, 9 and 14 under 35 U.S.C. 103(a) as being unpatentable over Fairley et al (6,288,780) in view of Yonezawa (6,621,568), such rejections are traversed insofar as they are applicable to the present claims, and reconsideration and withdrawal of the rejections are respectfully requested.

As to the requirements to support a rejection under 35 U.S.C. 102, reference is made to the decision of In re Robertson, 49 USPQ 2d 1949 (Fed. Cir. 1999), wherein the court pointed out that anticipation under 35 U.S.C. §102 requires that each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. As noted by the court, if the prior art reference does not expressly set forth a particular element of the claim, that reference still may anticipate if the element is "inherent" in its disclosure. To establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." Moreover, the court pointed out that inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.

With regard to the requirements to support a rejection under 35 U.S.C. 103, reference is made to the decision of In re Fine, 5 USPQ 2d 1596 (Fed. Cir. 1988), wherein the court pointed out that the PTO has the burden under §103 to establish a prima facie case of obviousness and can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of

ordinary skill in the art would lead that individual to combine the relevant teachings of the references. As noted by the court, whether a particular combination might be "obvious to try" is not a legitimate test of patentability and obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. As further noted by the court, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

Furthermore, such requirements have been clarified in the recent decision of In re Lee, 61 USPQ 2d 1430 (Fed. Cir. 2002) wherein the court in reversing an obviousness rejection indicated that deficiencies of the cited references cannot be remedied with conclusions about what is "basic knowledge" or "common knowledge". The court pointed out:

> The Examiner's conclusory statements that "the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software" and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" do not adequately address the issue of motivation to combine. This factual question of motivation is immaterial to patentability, and could not be resolved on subjected belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher."... Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion. (emphasis added)

Turning first to Fairley et al and the disclosure thereof, applicants note that while Fairley et al discloses in Fig. 5 a bright field illuminating 507 illuminating the sample through an objective lens 522 and the utilization of a dark field illuminator as represented by the laser 523 which directly illuminates the sample without passing

through an objective lens, applicants note that the disclosure of Fairley et al in relation to adjusting optical conditions for defect detection by dark field illumination is utilized. That is, while col. 4, lines 34-39 of Fairley et al indicates that it is an object of the invention to provide an system having the ability to minimize contrast variations and coherent noise problems, such a system is described as a system "having the ability to detect defects beyond those detectable using monochromatic or narrow band bright field imaging alone". (emphasis added) As described in connection with Fig. 8, a functional depiction of the components used in dark field imaging is utilized, as also described at col. 10, line 31 to col. 13, line 23, with Fig. 9 also representing dark field imaging as described at col. 13, line 24 et. seq., in which the dark field illumination parameters includes polarization variation as described at col. 13, line 61 to col. 14, line 51, for example, and light level control is effected in combination with dark field imaging in connection with Fig. 14. As is apparent, the description of Fairley et al with respect to the possibility of contrast variation is obtained utilizing dark field illumination without passing through an objective lens, and applicants submit that the claimed features as set forth in each of the independent and dependent claims patentably distinguish over Fairley et al in the sense of 35 U.S.C. 102 and 35 U.S.C. 103, and all claims should be considered allowable thereover.

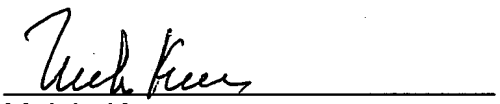
With regard to the proposed combination of Fairley et al and Yonezawa, the Examiner recognizes that Fairley et al does not disclose that contrast of the image signal is adjusted by adjusting a transmission ratio of 0-th order diffraction light. Applicants note that as described with respect to Figs. 12 and 13 of Fairley et al, while beams of incident laser light produce alpha diffraction orders and beta diffraction orders, some of which orders are blocked in the manner described, it is readily apparent that such also relates to dark field illumination and imaging without passing through an objective lens as disclosed and claimed herein. Irrespective of

the Examiner's contentions concerning Yonezawa, applicants submit that Yonezawa cannot be properly combined with Fairley et al to arrive at the claimed invention and applicants submit that the features of claims 2-7, 9 and 14 patentably distinguish over this proposed combination of references in the sense of 35 U.S.C. 103. See In re Fine, supra. Thus, applicants submit that all claims patentably distinguish over this proposed combination of references and should be considered allowable at this time.

In view of the above amendments and remarks, applicants submit that all claims present in this application patentably distinguish over the cited art and should now be in condition for allowance. Accordingly, issuance of an action of a favorable nature is courteously solicited.

To the extent necessary, applicant's petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (520.40997X00) and please credit any excess fees to such deposit account.

Respectfully submitted,



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